DOCUMENT RESUME

ED 476 163 SP 041 515

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TITLE	Community College's Expanding Role in Teacher Preparation.
PUB DATE	2003-03-00
NOTE	34p.
PUB TYPE	Information Analyses (070)
EDRS PRICE	EDRS Price MF01/PC02 Plus Postage.
DESCRIPTORS	*Alternative Teacher Certification; *Community Colleges; Mathematics Teachers; Postsecondary Education; *Preservice Teacher Education; Secondary Education

ABSTRACT

Community colleges across the nation are responding to the growing need for teachers in high need areas by expanding their role in teacher preparation. Blinn College, a junior college in Brehnam, Texas, began offering an alternative certification program for individuals interested in teaching 8th-12th grade mathematics. A thorough review of alternative certification literature from 1997-02 was conducted. A meta-analysis was conducted after coding 77 articles. Among the variables coded were program descriptions, candidate characteristics, and candidate support. Additionally, the articles were coded to identify the experiences most conducive to effective teacher preparation. Of the articles coded, 34 percent of the coded articles were qualitative, quantitative, or hybrid, with the balance being reports. Alternative certification programs tend not to report completion or retention rates. Programs vary across states and across programs, with some teachers receiving little or no training before entering the classroom, while others receive extensive training. Most authors fail to report a thorough description of their program and entry requirements. (Contains 34 references.) (Author/SM)

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Running head: ALTERNATIVE CERTIFICATION

ED 476 163

Community College's Expanding Role in Teacher Preparation

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KEY WORDS: "ALTERNATIVE CERTIFICATION", "TEACHER PREPARATION", "PROGRAM DESCRIPTION", "POST BACCALAUREATE", "TEACHER CERTIFICATION"

Authors' Note

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Abstract

Community colleges across the nation are responding to the growing need for teachers in high need areas by expanding their role in teacher preparation. Blinn College, a junior college in Brenham, Texas, began offering an alternative certification program for individuals interested in teaching 8-12 grade mathematics.

A thorough review of alternative certification literature from 1997 to 2002 was conducted. A meta-analysis was conducted after coding 77 articles. Among the variables coded were program descriptions, candidate characteristics, and candidate support. Additionally, the articles were coded to identify the experiences most conducive to effective teacher preparation.

Of the articles coded 34 percent of the coded articles were qualitative, quantitative, or hybrid with the balance being reports. Alternative certification programs tend not to report completion or retention rates. Programs vary across states and across programs with some teachers receiving little or no training before entering the classroom whereas others receive extensive training. Most authors fail to report a thorough description of their program and entry requirements.

Community College's Expanding Role in Teacher Preparation

The educational system is faced with a dilemma of supplying qualified teachers in the classroom and it is predicted that 2.7 million new teachers will be needed by the end of the decade. To meet the growing demands, teacher education has been reforming policy and investigating a variety of training grounds (Hallinan & Khmelkov, 2001; Cox, Matthews, & Assoc., 2001).

With the publication of two reports in 1986, the reform movement of teacher education was underway. The Carnegie Task Force on Teaching as a profession released *A Nation Prepared: Teachers for the 21st Century* (1986) and The Holmes Group released *Tomorrow's Teachers* (1986), advocating a twofold approach. These publications suggested enriching the professional education of teachers by eliminating undergraduate teacher certification programs and requiring graduate level training. Also, a mentor system was postulated (Hallinan & Khmelkov, 2001).

Professional development schools (PDS) have been more successful in the reform movement. PDSs integrate teaching practice with academic research and training. The current PDS models probably resemble the Holmes Group's *Tomorrow's Schools* and a host of other reform proposals. The major goals are to prepare future teachers with state-of-the-art teaching practices

and to bring together researchers and practicing teachers to test new knowledge and teaching practices. Despite PDSs success, there are weaknesses and unsolved problems. For example, traditional modes of teaching continue to prevail in the classroom despite PDSs attempt to successfully become a prototype of best teaching practices and school restructuring (Hallinan & Khmelkov, 2001).

In a recent announcement, education secretary Rod Paige said that to meet the growing demands "states should eliminate obstacles—such as requiring formal teaching credentials—and open the teaching ranks to nontraditional applicants." The president of the American Association of School Administrators, Paul Houston, said he supports the push for alternative certification (AC) programs, but that this is only part of the solution. The real solution is to give better pay and working conditions as incentives to recruit and retain qualified teachers in very rural and high-poverty schools (Schouten, 2002).

Qualified Teachers

Teachers are teaching America's students in courses they are not qualified to teach. There is a lack of consensus on how to define a "qualified teacher". The standard indicator is whether or not the teacher has a certificate or license in his/her teaching field. According to Ingersoll, "about a third of all secondary school teachers who teach mathematics do not

have a major or minor in mathematics, mathematics education, or related disciplines like engineering or physics" (Ingersoll, 1999, p. 27). Teachers in high-poverty schools and small schools with fewer than 300 students are more likely to be out-of-field (Ingersoll, 1999). The National Commission on Teaching & America's Future (NCTAF) cites that 27% of high school students are taught mathematics by out-of-field teachers and the percentage is much higher is high-poverty schools (National Commission on Teaching America's Future, 2002). The consequences of out-of-field teaching may be an over reliance on textbooks, negative effects on learning environment, a decrease in teachers' morale, and a decrease in commitment to the educational process (Ingersoll, 1999).

INSERT FIGURE 3 ABOUT HERE

Many districts continue to hire unqualified teachers. No state allows plumbers or hairstylists to work without being qualified yet teachers are allowed to enter without any training. Twelve percent of all newly hired teachers enter the classroom without any training at all (what matters most).

INSERT TABLE 3 ABOUT HERE

History of Alternative Certification

New Jersey was the first state to receive publicity regarding AC when it enacted legislation for alternative routes to certify teachers in 1984. New Jersey set out to design a program as an alternative to emergency certification. Emergency certification usually placed teachers in the classroom with no prior instruction or training (Schouten, 2002). In 1985, New Jersey created an AC program not because of a teacher shortage but to recruit more qualified candidates into teaching. The New Jersey program was successful in recruiting quality candidates and minorities into the teaching profession and has more than doubled the supply of qualified teaching applicants in the past fifteen years (Klagholz, 2001). Texas followed in 1985 by implementing a single AC program in the Houston Independent School District (Schouten, 2002). In 1986, there were 18 states that allowed AC programs, and by 1992 there were 40 states (Shen, 1997). In 1992 former President George Bush advocated AC when he said "We should break down the barriers to talented people who want to teach and have demonstrated their competence in other fields" (As cited in Haberman, 2002, 2002).

The population of non-traditional candidates seeking to enter the teaching profession and the method on how best to prepare them is one of the major forces behind the growth of AC

programs. Demand and shortages for teachers is geographic and subject-matter specific with the greatest demand in inner cities and rural areas and mostly in secondary mathematics, science, and special education (National Center for Education Information, 2002).

Community colleges are responding to the dilemma of teacher shortages by expanding their role in teacher preparation. Community colleges have been contributing to America's teacher pool for years. From the beginning, teachers were among graduates of two-year colleges who went directly into the clinical training. This concept of teachers goes back to laboratory schools as envisioned by John Dewey (Hallinan & Khmelkov, 2001). Community colleges reach diverse minority populations and nontraditional students seeking employment transitions. Through service-learning programs and pre-education advising, community colleges can reach these diverse populations, provide field-based training, and determine early individuals predisposition to teaching (Franco, 2000).

Today community colleges offer education courses and AC programs, and many teachers begin their education at community colleges. In Maryland, fifty percent of teachers begin at two-year institutions and state education officials have an Associate of Arts in Teaching degree that allows aspiring teachers to transfer community college hours to any public or

private university in the state. Community colleges in Arizona offer extensive online teacher preparation courses (Cox, Matthews, & Assoc., 2001). In Texas, community colleges offer AC programs in 8-12 mathematics, foreign language, and science.

Everyone does not favor community college involvement in teacher certification. David Imig, the president of the American Association of Colleges for Teacher Education commented that the public is setting higher expectations for teachers. Imig stated, "Four year institutions are saying we have to have some ability to set the standards for people who come to us" (As cited in Cox, Matthews, & Assoc., 2001, p. 18). Others argue that community colleges have been contributing to America's teacher pool for years. From the beginning, teachers were among two-year college graduates who went directly into the schoolhouses. Many of the current teacher population began at community colleges before transferring to four-year universities.

According to Jan Hughes, associate dean in the College of Education at Texas A&M University "We do not see community colleges as competition. We see them as an opportunity, as a partnership" (As cited in Cox, Matthews, & Assoc., 2001, p. 18). Texas A&M has begun a Regent's initiative project. Under this initiative, collaborative efforts with nine community colleges have been established. Cohorts of 20-30 students at each community college majoring in high need areas receive

performance stipends and guaranteed admission into the College of Education provided they meet the program requirements.

Certifications

There are various means of certifications (see figure 1). The National Commission on Teaching and America's Future believe that effective modern educational programs should contain common characteristics and the one common goal of making better teachers (Hallinan & Khmelkov, 2001). There should be clear understanding of quality teaching that is substantiated through courses and field experiences. Curriculum should be based on child development, learning theory, cognition, motivation, and subject matter pedagogy. Coursework and clinical experiences should be integrated with at least thirty weeks of field base experience and extensive use of various assessments (case studies, teacher research, performance assessments, and portfolios) that ensure learning is applied to real-world problems. Effective educational programs should be guided by practice and performance standards, a clear understanding of the community, and strong relationships between school and university based faculty (Hallinan & Khmelkov, 2001).

INSERT FIGURE 1 ABOUT HERE

Alternative Certification/ Post-Baccalaureate Programs

To address the teacher shortage, community colleges are entering teacher preparation by offering AC programs and universities are offering Post-baccalaureate programs (see figure 2). The term post-baccalaureate is most commonly associated university based AC programs (Duhon-Hayes, 1996). Traditional teacher certification (TC) can be defined as "public school teaching credentials acquired by completing a state-approved program at an institute of higher learning" (Ruckel, 2000 p. 3). The term alternative certification is not specific. According to Wright, AC programs are defined as "accreditation programs designed to allow individuals with significant subject-area background to complete their teacher preparation education while teaching full-time in a participating school district" (Wright, 2001, p. 24). AC is also defined as "a state-approved program that waives coursework in pedagogy (Chappelle & Eubanks, 2001, p. 312).

INSERT FIGURE 2 ABOUT HERE

Proponents believe AC programs reduce teacher shortages, raise teacher quality, and diversify the teaching population while opponents believe that AC programs degrade teaching by lowering entry costs and hindering student learning (Shen,

1997). With the growing number of AC programs, school districts and policy makers must ensure that effective AC programs are created and qualified teachers produced. Fiestritzer of the National Center for Education Information outlines five components of effective AC programs: strong academic coursework, field-based programs, strong working relationship with mentors, group training, and collaboration among state departments of education, higher education, and school districts in the planning and delivery of programs (Ruckel, 2000).

Teachers seeking certification through AC programs meet content standards in their field of study. There is evidence that supports that a professional development based teacher education produces better results than traditional programs because it promotes teacher confidence and self-efficacy in teaching. Consequently, these teachers are less susceptible to the reality shock of teaching than their counterparts and usually have lower attrition rates during their first few years (Hallinan & Khmelkov, 2001).

Pituch and Miller (1999) found that if AC programs provided regular mentoring, there was basically no difference in their students' achievement from the students whose teachers were TC. The researchers also found no statistically significant difference between behaviors thought to underlie effective

teaching, their perceptions of initial preparation, or teaching competence after teaching three years.

Post-Baccalaureate Certification Program Description

For illustrative purposes, one program description for post-baccalaureate program is offered. This is not a generalization to all PB programs. The secondary post-baccalaureate certification program at Texas A&M University is designed to assist people who hold a baccalaureate degree in public school subjects, with certain entry-level skills, in becoming certified teachers. Candidates must hold a baccalaureate degree from an accredited institution with an overall grade point average no less than 2.75 on a 4.0 scale. They must have completed subject area courses deemed by discipline faculty to provide the candidate with the knowledge necessary to pass the state's certification test in the content area. The passing of this test is considered minimal qualifications necessary to teach the subject tested. The number of hours necessary range from 24 to 36, depending on the discipline. Candidates must achieve at least 400 on the Verbal and Quantitative portions of the Graduate Record Exam respectively. Students who meet the prerequisites, or will by the beginning of the summer course work (e.g., students who will graduate in May), are authorized to take the content certification test. Candidates must past the *Examination for*

the Certification of Educators in Texas (ExCET). The current passing score for the ExCET test is 70.

The current program begins in the first summer session each year and concludes at the end of the following second summer semester. During the first summer, candidates receive instruction in planning and teaching strategies in their content area and language acquisition and information about schools and society. During the academic year, August to May, candidates teach full-time in public school classrooms as teachers of record with a Probationary Certificate, receive a salary for their efforts, and attend a seminar to enhance their teaching skills and prepare for the state certification pedagogy test which is taken in the spring following the summer start.

Alternative Certification Description

For illustrative purposes, one program description for community college alternative certification program is offered. This is not a generalization to all AC programs. The *Blinn Teacher Education Alternative Certification Host Program, TEACH,* was created in response to requests by superintendents of local school districts to address the local teacher shortage. Blinn College is located in Brenham, Texas between Houston and Austin and is surrounded by a number of rural communities each with their own independent school district. The Blinn *TEACH* Program is designed to assist people who possess a baccalaureate degree

from an accredited institution in becoming certified teachers. In mathematics, the participants must have an overall grade point average of no less than 2.5 on a 4.0 scale and a minimum of 12 credits of undergraduate mathematics. The candidates undergo an interview process and are admitted upon approval of the selection committee that is comprised of content area and teacher education specialists.

Program participants start either in January or June and then begin teaching in August. The program spans approximately fifteen months. Phase 1 provides professional development training. Participants are introduced to theory of human development, special populations, models of teaching, lesson planning, classroom management, development of reading and study skills, motivation of student learning, assessment of student learning, and information on state policies and laws related to public education. Members of the cohort engage in on-going discussions and reflections to foster interaction among members. The coursework includes online pedagogy coursework using *WEBCT* and the mathematics content is taught simultaneously by two-way conferencing and traditional classroom attendance.

Upon the completion of the online pedagogical component and subject content modules, participants are employed by school districts where they subsequently receive mentoring from members of the pedagogical team of Blinn College and a school site

mentor for the ensuing year. Candidates must pass the Texas Examination for the Certification of Educators in Texas (TExES)

Methodology

Articles published since 1997 were coded for several attributes. Among the attributes coded were type of alternative certification program (see Figure 1), duration, admission standards, type of field placement, areas of certification, retention rate, and success rate.

The coding sheet was developed for quantitative meta-analysis similar to Capraro, Capraro, and Henson (2001) and Henson, Kogan, Vacha-Haase (2000), and Vacha-Haase (2001). The data collection allows for the both descriptive and qualitative analyses. Articles were selected using both the ERIC and PsychLit databases.

Article Selection

A search for articles dealing the certification of teachers via alternative routes was conducted in the ERIC and PsycLit databases using the keyword "Alternative Certification" from 1997 to 2002. A total of 273 articles were identified from the ERIC database and 23 from PsycLit with 4 duplicated (3 Eric + 1 PychLit), 204 were false hits. Of the 296, 11 were not able to be obtained, leaving 77 articles dealing with alternative certification available for review (74 from the ERIC database and 3 from PsycLit). All 11 unavailable hits were dissertations.

INSERT TABLE 1 ABOUT HERE

The remaining 77 articles were then coded for multiple criteria, including type of institution sponsoring the certification program. From these articles, program descriptions for 90 programs were reported. Of the 90 programs, only 2 percent reported retention rates, 47 percent reported degree requirements, and 22 percent reported testing requirements. Seventeen percent reported completion rates. The majority of authors failed to mention the selection process for entering the program and made a generic statement regarding highly qualified applicants. This probably occurs because many researchers spontaneously report results of immediacy without examining their programs longitudinally.

INSERT TABLES 2 AND 3 ABOUT HERE

The 77 articles were then coded for multiple criteria, including type of institution sponsoring the certification program. Twenty-seven of the 77 articles were coded as qualitative, quantitative, or hybrid. From these articles, program descriptions for 30 programs were reported. Of the 30 programs, only 7 percent reported retention rates, 70 percent reported degree requirements, and 33 percent reported testing

requirements. Seventeen percent reported completion rates from each certification area. The majority of authors failed to mention the selection process for entering the program and made a generic statement regarding highly qualified applicants. This probably occurs because many researchers spontaneously report results of immediacy without examining their programs longitudinally.

INSERT TABLE 4 ABOUT HERE

Coding of Study Characteristics and Analysis

Multiple study characteristics were coded to use as predictors of alternative certification variation in a multiple regression analysis. However, the study characteristics examined (e.g., gender, ethnicity, age, SES,) were so inconsistently reported across studies, that after listwise deletion, regression analysis was not possible due to a small n. Therefore, we did not attempt the regression and report here only the descriptive results of coded variables. Nevertheless, the present study does characterize the typicality of alternative certification programs across the various institutions offering those programs as well as variability in these programs.

Discussion

The data indicated four general conclusions. First, there is reasonable consensus in the published literature that certain

activities/experiences are believed to positively impact preservice teacher preparedness to teach: (1) school-based or school-site experiences, (2) mentoring, (3) practical experiences with teaching the material they will be teaching, and (4) service provider based supervision.

The literature is reasonably mixed on retention rates. Specifically, inconsistent reporting within a category prevented generalizations of alternative certification programs. The studies reported are mostly non-longitudinal with authors not reporting admission or completion rates. If studies reporting one-year results had reported retention rates consistently it would be possible to conduct a multiple linear regression using study characteristics to evaluate those characteristics most commonly associated with first year retention. Because this was not reported, it is difficult to affirm Natriello and Zumwalt's (1992) assertion that the, ". . . the most striking differences are . . . between *alternative route mathematics* teachers and the five other groups [alternative and traditionally prepared mathematics, elementary and English teachers]". (emphasis added, p. 72-73)

One argument for alternative routes to certification is that more minorities are attracted to teaching in school with higher turnover. Because so little information is reported on retention and no studies included retention rates for

alternatively certified teachers in school with high turnover rates, it is impossible to support this claim.

The impact of alternatively certified teachers on student achievement was inconclusive. There have been many recent publications because of the high profile nature of the Secretary's Annual Report on Teacher Quality (U.S. Department of Education) (cf. Darling-Hammond & Young, 2002). The Secretary's report called for the dismantling of the current teacher education system and the abolishment of the hurdles to teaching and policy decisions based on 'scientifically-based research'. While it is true in education that it is nearly impossible to conduct double blind studies as is customary in medicine, it too is nearly impossible to conduct a true experiment in most educational settings. The literature is predominately qualitative with most the quantitative studies using only descriptive statistics. None of the 77 articles considered for this study reported the results of regression analyses or used multivariate methods. In psychology, it is commonly understood that multivariate analyses better represent the reality to which researchers are trying to generalize (Tatsuoka, 1971, Thompson, 1984,1991). Therefore, multivariate methods would improve the rigor of quasi-experimental designs of educational researchers. Often, due to small samples it is not possible to use more advanced statistical methods leaving researchers to use

qualitative techniques which often provide insights specific to certain phenomena or the development of theoretical constructs.

The idea that either alternative or traditionally certified teachers out perform the other group is not supported from the literature base. First, the studies are so few, the sample sizes so small, and outcome measures so varied that it is *not* possible to draw conclusions that one certification route is 'better' than the other. Additional concerns include that all alternative certification programs cannot be lumped together. For instance, post-baccalaureate programs and other programs that mirror traditional preparation would need to be evaluated separately from other programs. Next, student outcome measures need to be selected so that socio-economic, ethnic, and school effects are controlled. If one is to believe the literature that most alternatively certified teachers work in high-minority, under-performing schools then a study can only consider other teachers at matched schools. No articles identified in this study used a matched school design.

All the studies attempting to attribute student achievement differences by teacher certification type had inadequate sample sizes. A misconception may arise if the researcher believes that the students are the unit of study and not the teacher. Therefore, the appropriate level of study in for this purpose is the teacher and articles reporting statistically significant differences between the two groups typically used small numbers of

teachers. By contrast, the number of students in the studies were between 171 and 1262. This large sample allowed the researcher to make generalizations about students but not about the teachers or the programs to which they wanted to know. These types of studies do not tell us what we want to know, and we so much want to know what we want to know that, out of desperation, we nevertheless believe they do.

The data supported Darling-Hammond's position (1990) that, "The concept of "alternatives" to traditional state certification leaves a great deal of room for varied meaning." (p. 136) Figure 1 shows the various types programs contained in the literature. However, programs that were identified by the same names often shared few other characteristics. Figure 2 delineates the programs in terms of earning a degree. The evidence from this study would situate post-baccalaureate programs in a position to be compared to traditional programs. While there are differences in the preparation of the two groups both groups are taught in many cases by the same faculty who teaches in the traditional program.

It seems a puzzlement that there would be so much controversy over the simple idea of wanting to teach after earning a baccalaureate degree outside of education. As tightly regulated as becoming an electrician, plumber, and beautician are if one chooses to teach after earning their baccalaureate in

traditional venue one would have to earn almost another baccalaureate degree. Perhaps the controversy erupting over alternative certification is more closely related to being the best buggy whip manufacturer at the turn of the 1900's. Perhaps colleges of education were just too long in noticing that people possessing the most important qualification for teaching, desire, were being neglected. Perhaps if colleges of education provided this service, the controversy would have been averted.

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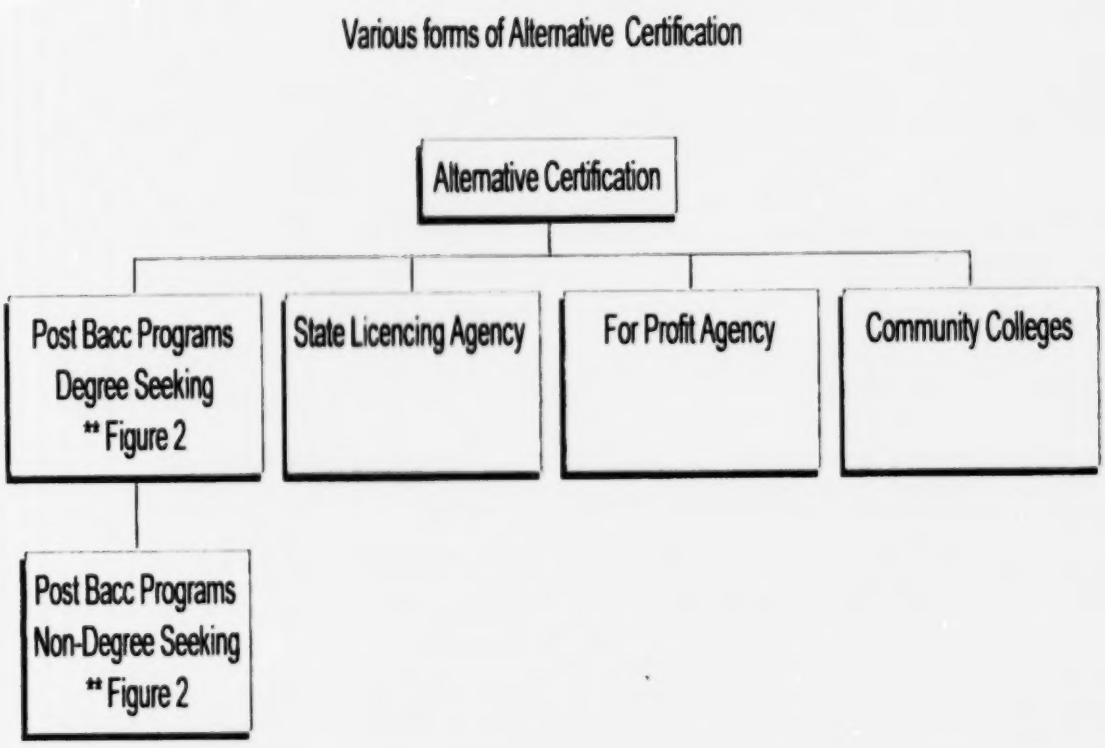

Figure 1. A heuristic model of the various types of alternative certification that this article seeks to investigate.

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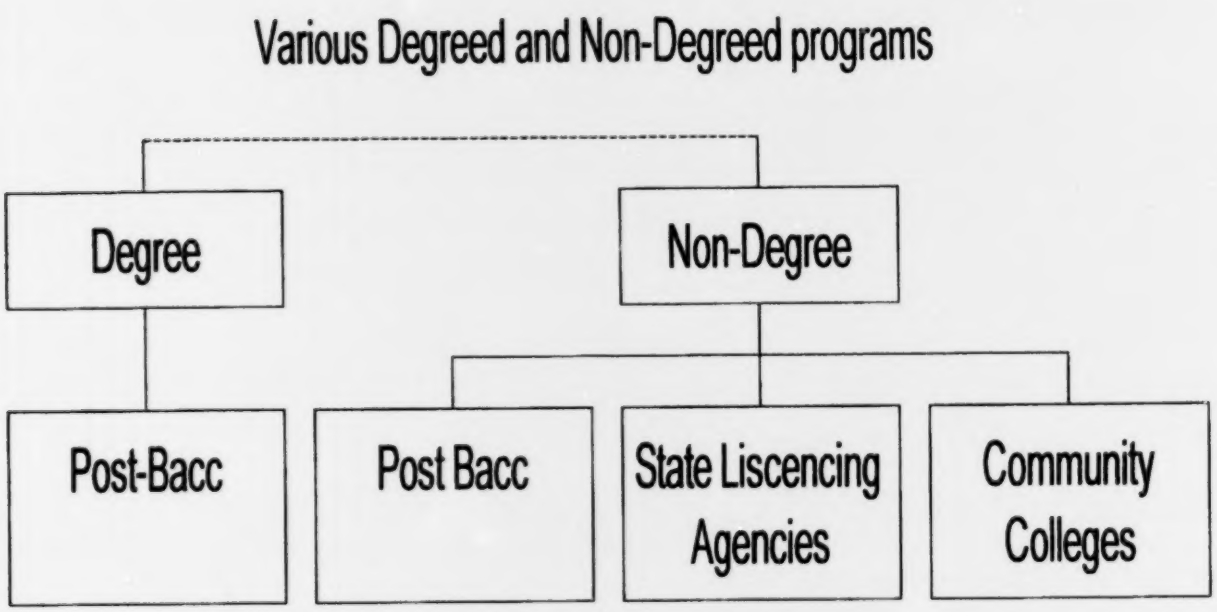

Figure 2. A model of the different types of degree and non-degree programs.

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Table 1

Number of Search Articles found for keywords Alternative, Certification, and Post-Baccalaureate.

Database	Number of hits	Not Available	Not on Topic	Duplicates	Available Sources
1. ERIC	273	0	194	3	76
2. Psy-Lit	23	11	10	1	1
Total	296	11	204	4	77

Table 2. Means and Standard Deviations for Program Characteristics of the 90 Programs Reporting Data

	GPA	State Test	GRE /SAT	Mentoring	Student Teaching
Degreed	2.49	100% Sd 0	80% Sd.41	87% Sd .35	80% Sd .48
Non-degreed	2.75	.0% Sd 0	100% Sd .0	67% Sd 0.58	0% Sd .0
Percent Reporting Both Data	16%	2%	13%	19%	7%

- 16 percent reported GPA requirements.
- 4 percent reported state test requirements
- 22 percent reported standardized test requirements for entry into their program.
- 27 percent reported mentoring requirements and of those, 24 percent required a mentoring component.
- 19 percent reported student teaching requirements and of those, 12 percent required student teaching component.

Table 3: Reasons for Choosing Alternative Certification

	Job Separation	Retirement	Voluntary Career Change	Desire to Teach	Other
Program	.33	.17	.50	.33	.67

Note. Search conducted from the years 1997-2002.

Table 4. Means and Standard Deviations for Program Characteristics of the 30 Programs Reporting Data from Qualitative, Quantitative, and Hybrid Studies

	GPA	State Test	GRE /SAT	Mentoring	Student Teaching
Degreed	2.43	*	0% Sd 0	86% Sd 0.38	0% Sd 0
Non-degreed	3.0	*	100% Sd 0	67% Sd 0 .58	0% Sd 0
Percent Reporting Both Data	33%	*	20%	33%	13%

- 33 percent reported GPA requirements.
- 33 percent reported standardized test requirements
- 30 percent reported mentoring requirements and of those, 78 percent required mentoring.
- 23 percent reported student teaching requirements and of those, 29 percent required student teaching.
- * No information reported

Note. Search conducted from the years 1997-2002.

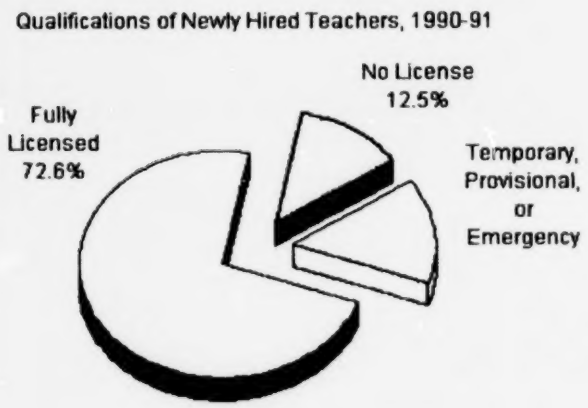

Figure 3: Source: U.S. Department of Education, Schools and Staffing Survey, 1990-91. Unpublished tabulations, National Data Resource Center, 1993.

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